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No. 55

FIRE GUARD

Emergency Services Newsletter

Number 55 January 1992

"Happy New Year"

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2705 Spurgin Road
Missoula 59801 542-4300

State Fire Marshal Position

Application deadline for State Fire Marshal is Friday; January 10, 1992. This position supervises deputy state fire marshals and manages the provision of statewide fire prevention and investigation services by the Department of Justice. (See details on pages 2 and 3 of this Newsletter.)

Training Opportunities

for Personal Growth

For those of you who have requested special training courses, over a dozen are scheduled this Winter. Please ***pass the word*** about these training opportunities. Subject areas include: Fire Fighter Safety and Survival; New Chiefs and Trustees Course; Leadership with Chief Brunacini; Basic Photography and Camcorders; Hazardous Materials Incident Management; Teaching Effectively with Dr. Walls; Uniform Fire Code Sections - Life Safety and Hazardous Materials; Instructor and Training Officer Meeting; Company Tactical Operations Decision Making; Hazardous Materials "Operations Level" Instructor Hand-Off; Power of Politics; Arson Evidence Collection; and Leadership Strategies for Success. Specific course dates are listed in the training schedule at the end of this Newsletter and a brief descriptions are on pages 22 and 23.

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PLEASE RETURN

STATE OF MONTANA

DEPARTMENT OF JUSTICE

December 5, 1991

JOB TITLE:	State Fire Marshal
POSITION NUMBER:	23001
CLASSIFIC. CODE:	373012
LOCATION:	Helena
DIVISION:	Law Enforcement Services, Fire Prevention and Investigation Bureau
PAY GRADE:	17 (currently being reviewed for possible reclassification)
STARTING SALARY:	$30,665
BARGAINING UNIT:	None
STATUS:	Permanent, Full-time
SUPPLEMENT:	No

Application Deadline: All application materials must be submitted to a local Job Service Office by 5:00 p.m., **Friday, January 10, 1992.** Late or incomplete applications will not be considered.

Special Information: This position is addressed in the Department of Justice Affirmative Action Plan and encourages women and minorities to apply. This position is currently under classification review. Final classification will be at the grade 17 or grade 18 level. If another vacancy occurs in this job classification within three months of the closing date of this announcement, the same applicant pool may be used for selection. If applicants for this position do not meet the minimum qualifications, a training assignment may be used.

TYPICAL DUTIES: Supervises Deputy State Fire Marshals and manages the provision of statewide fire prevention and investigation services by the Department of Justice. These services include adopting fire and life safety administrative rules; inspecting public buildings including schools and state government facilities; establishing and promoting fire prevention programs; licensing or registering fire safety equipment dealers; and assisting or initiating arson investigations. The bureau serves as the lead agency in fire investigation and Uniform Fire Codes adoption and enforcement. Extensive travel is required.

QUALIFICATIONS: Extensive knowledge of management, leadership, appraisal, and planning practices; Montana codes annotated dealing with fire safety and investigation (MCA Title 50), related Administrative Rules and the Uniform Fire Codes (UFC); considerable knowledge of budget, appropriation, and legislative practices; considerable knowledge of the Montana Codes Annotated dealing with crimes, criminal justice information and rules of evidence. Skill in the use of tools and equipment used in arson investigations. Ability to remain calm in highly stressful and dangerous situations; to make correct, legal decisions in highly stressful situations and to give correct instructions to the deputy fire marshals under his/her supervision in such situations; be able to review and understand plans for new construction or remodeling in regard to fire and life safety requirements; ability to conduct and resolve complex fire code and investigation issues; to establish and maintain effective working relationships with employees; to communicate effectively orally and in writing.

The above knowledges, skills and abilities are usually acquired through graduation from high school and one of the following combinations of education and experience:

1. Bachelor's degree in Public Administration, Fire Sciences or closely related field from an accredited college or university. Five years of fire investigation and inspection experience including a minimum of two years as a full-time supervisor handling a variety of fire investigations and inspections comparable to those a Deputy Fire Marshal is expected to handle and at least three years experience in Uniform Fire Code Enforcement; or

(over)

STATE OF MONTANA

JOB VACANCY

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2. Two years of post-secondary education from an accredited college or university in public administration or a fire science-related field. Seven years of fire investigation and inspection experience including a minimum of four years as a full-time fire investigative/inspection supervisor handling a variety of fire investigations comparable to those a Deputy Fire Marshal is expected handle and at least five years experience in Uniform Code Enforcement.

Additional supervisor, fire service training and specialized courses are desirable.

APPLICATION AND SELECTION PROCESS:

1. Complete a Montana State Application for Employment (PD-25) and enclose a resume'.
2. Submit a summary (no more than 2-pages, typewritten, double-spaced) describing supervisory experience which includes the number of persons supervised.
3. If claiming Preference under the Veteran's Employment Preference Act or Handicapped Person's Preference Act, all documentation of eligibility for preference must be submitted at the time of application.
4. The applicants who appear to best meet the qualifications for this position may be selected for a structured interview. The most successful applicants may be subject to a background investigation including a criminal record check.
5. For employees new to state government, final confirmation as the State Fire Marshall will be made following a one-year performance appraisal/probationary employment period.
6. State of Montana employees who have not completed their probationary period may be required to serve an additional probationary period if selected for this position.

In accordance with federal law, the person selected will be required to provide documentation showing lawful authorization to work in the United States. This documentation is not to be presented at the time of application.

December 5, 1991
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1991 FIRE INCIDENT REPORTS DUE BY FEBRUARY 29, 1992

By Anita Varone

Well it's that time again and we are getting ready to gear up for year-end reporting. It is always interesting to see the finalization of another year, how we compare with previous years, the quality of the data, the estimated dollar loss and the number of incidents.

The first eight months of 1991 were difficult for the reporting system. We experienced major computer difficulties and ultimately replaced the entire system. Because of the extended period of downtime, it took considerable effort to catch up so we could be prepared for the end of the year.

This year's deadline is the same as last year, February 29, 1992. That will give you approximately 60 days to finalize and submit all your reports and will give us some time to enter, proof and complete our work before we have to forward the data on to the National Fire Information Council (NFIC).

The incidents you report are included in the national statistics and used in a variety of ways. Prevention is one of the most important uses for data collected. It tells us what is burning, where it's burning, how much it's costing us, and hopefully, why. Constructive prevention plans are developed from these statistics and distributed to sources that will benefit most; the elderly, schools, etc.

Industry product recall is also another valuable use of the data. Several products are recalled each year because of the information you reported that will undoubtedly save lives.

We appreciate the dedication you have demonstrated to the reporting system and cannot say often enough that we recognize the long hours you spend completing the information. It is because of committed firefighters like you that the program is successful.

1991 FIRE FATALITIES

Anita Varone

We look at fire deaths separately from all the other data. Montana does not have a proud history in regard to preventing people from perishing in fire. We attempt to analyze the causes with the hope that someone's life may be spared because of a successful prevention program that was developed as a result. We compare ages with causes, the time of year with causes, geographic areas with causes and any other comparisons that might give us a clue about prevention. So far this year we have received information on 21 fatalities. We seem to maintain a relatively consistent number, although the average for the last ten years is 18. Following is a breakdown by year:

1990 - 22
1989 - 13
1988 - 28
1987 - 21
1986 - 13
1985 - 13
1984 - 27
1983 - 20
1982 - 14
1981 - 20

Montana's record has historically been high compared to many other states. Only Alaska consistently reports a higher death rate than Montana in all the western region, which includes thirteen states. Our track record is not good.

Fifteen of the fatalities so far were male and 6 were female. Generally more men than women die from fire related injuries. Some educated guessers indicate a couple of reasons:

1. More men than women smoke and smoking is the number one cause, nationally, for fire fatalities, and
2. Men generally are involved in more vehicular accidents than women. Consequently, more die as a result of an ensuing fire than women.

Those reasons are highly debatable but, whatever the case may be for Montana, the numbers are not acceptable. Accidents happen, we all know that. However, most of these deaths could have been prevented.

It's too early to determine any particulars yet for 1991, but you might be interested to know what has been reported so far this year.

Separated into age groups:

AGE --	NUMBER OF FATALITIES
00-15	5
16-30	3
31-50	6
51-65	0
65-99	6
Unknown	1

Separated into counties:

COUNTY --	NUMBER OF FATALITIES
Blaine	1
Cascade	1
Gallatin	1
Lake	2
Lewis & Clark	1
McCone	1
Musselshell	1
Park	1
Pondera	2
Roosevelt	1
Toole	1
Yellowstone	7
Unknown	1

Separated into occupancy:

OCCUPANCY --	NUMBER OF FATALITIES
Residence	10
Vehicle	6
Multi-Dwelling	2
Other	2
Unknown	1

It is important to remember that a Civilian or Firefighter Fatality Report needs to be completed when someone is injured or dies. If someone is injured and dies later, after you submitted a report indicating an injury, you need to submit a second report changing the injury to a fire fatality.

When all the records have been collected and studied, an update will be provided for your information. If you have any questions, please give us a call at 444-2050.

BRK ELECTRONICS ANNOUNCES SMOKE DETECTOR REPLACEMENT PROGRAM

BRK Electronics has announced a testing replacement program for two models of AC-powered smoke detectors manufactured between November 1987 and March 1990, according to State Fire Marshal Ernest Emerson.

The company reported that tests of smoke detector models 1839I and 2839I indicate that the horns on some of these detectors might fail to function due to contamination of electrical contacts, Emmerson said. BRK has notified the Consumer Product Safety Commission and is continuing its investigation while undertaking the replacement program.

Specific models affected by this program are 1839I, 1839WI-M, 1839I12R, 2839I, 2839WI and 2839TH. According to BRK, nearly all of the affected detectors were installed in new homes, apartments and mobile homes purchased in 1988, 1989 and 1990. The detectors do not contain batteries.

Consumers should use the following steps to test their smoke alarms immediately:

1. Examine the user's manual to identify the model.
2. Hold down the test button for 20 seconds.
3. If the horn does not sound loudly, call the BRK toll-free telephone number 1 (800) 723-6990, to obtain a free replacement detector.

Because the detectors are AC-powered, BRK said the consumer should not attempt to remove or replace the detector before speaking with a BRK representative or reading the user's manual and following directions completely.

Article reproduced from News Release by Texas Commission on Fire Protection, Austin Texas.

CASCADE COMPRESSED AIR CYLINDER FAILS

The following investigative report was provided to Mr. Gene Brooks, Wyoming State Fire Marshal by Mr. Kenneth B. Sutton, Admin. Fire Chief of the Jackson - Teton County Fire Dept.

Compressed air cylinder fails causes extensive damage to Zone I - Jackson fire Station, Jackson - Teton County Fire Department, Jackson, Wyoming.

On September 17, 1991 at approximately 0545, the Sheriff dispatch received a 911 call reporting that there was an explosion with no fire at the Jackson Fire Station. Preliminary investigation revealed on of the DOT cascade air cylinders had failed causing a chain of events that was very destructive to the fire house: two pieces of apparatus, and various equipment located inside the station.

Background:

The cascade system has seven DOT 3,600 psi bottles. Five were manufactured in 1982 and purchased by us in 1988. They were hydrostatic tested to 6,000 psi in August of 1988 and placed into service later that Fall. In July of 1990, the compressor we were using developed major problems and in August of 1990, we purchased a new compressor and accessories and two more (new) DOT 3,600 psi bottles. It was early in 1991, when the system was up and running. The compressor had an auto fill system on it. The shutoff regulator was set at 3,400 psi. The compressor was in the auto fill position prior to the explosion.

Incident:

The first person on the scene did a preliminary check on the cascade system. The compressor was cool to the touch and the gauge was stuck on 3,400 psi indicating the compressor had not been operating for some time. All the bottles in the system were within the requirements for hydrostatic testing. Each bottle is tested to 6, 000 psi and each have a pop off valve that is set at 5,000 to 5,400 psi in case of overfill, none of these had activated.

The bottles were chained to an inside wall running east & west, that separated the apparatus floor from the kitchen. They were within one foot of the west exterior of the station. These walls were constructed of masonry block. The bottles were lined up in two rows: four next to the wall, three in front of them. The bottle that failed was in the front row in the middle. Five bottles were silver in color, two were green. This came in handy for training which bottle caused what damage. When the bottle failed, the wall, which they were chained to, was blown 19 feet to the north through the next block wall which knocked the sink and toilet half way across the bathroom. It completely destroyed the kitchen area. Two bottles came to rest in the kitchen. The west exterior wall had a 6 foot wide by 4 foot high hole blown through it and sent blocks 50 feet to the west. Two bottles ended up in the neighbors yard some 20 feet away from the station. One of these bottles valve was broke off and before ending up outside, it went straight up and put a perfectly round hole through the pre-stress concrete roof 14 feet high. The bottle directly to the east of the failed bottle was thrown vertically to the east and hit our Reo 6 X 6 on dual wheels and crushed them an bent the rear end. Also put a V shape in the water tank. Another bottle valve broke off, it traveled through a coke machine to the east hit the Dual wheels on the Aerial 30 feet away, turned headed south between several other apparatus 46 feet totaled out a hotsy steam cleaner machine then turned east 12 feet and came to rest amongst our stocked folding chairs.

The pressure in the station was so great, that it blew windows out all over the station. Also, it bowed the three 12 foot sectional doors to south out so bad, we used a backhoe to pull them back before we could open them.

Preliminary Conclusion:

The preliminary report from a metallurgist in Denver said the bottle may have had a defect in it and failed at the bottom. Although, we had no control over the defect in the bottle and all our bottles were within the hydrostatic requirements, this incident certainly emphasize the need to keep up your bottle maintenance and regularly hydrostatic test your bottles. If we had not, this incident would have been paid for by us, not the insurance company.

Total damage is estimated at $65,000; $40,000 for structure and $7,000 for vehicle damaged and the rest is contents.

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FIRE SAFETY ENHANCEMENT ACT OF 1991

From the National Volunteer Fire Council, June 1991

The Fire Safety Enhancement Act of 1991 (S-977) has been introduced into the U.S. Senate by Sen. Alfonse D'Amato (R-NY) and Sen. Daniel Patrick Moynihan (D-NY). The bill was referred for consideration to the Senate Banking, Housing, and Urban Affairs Subcommittee on Housing and Urban Affairs, chaired by Sen. Alan Cranston (D-CA). Rep. Benjamin A. Gilman (R-NY) has introduced a companion bill (HR-2099) in the U.S. House of Representatives. The House bill was referred for consideration to the House Banking, Finance, and Urban Affairs Subcommittee on Housing and Community Development, chaired by Rep. Henry Gonzalez (D-TX).

The bills would direct the U.S. Department of Housing and Urban Development (HUD) to modify its housing quality standards to require installation pf smoke detectors in all HUD - assisted housing. In effect, the proposals would mandate installation of smoke detectors in low- and moderate-income housing rental and ownership programs, including FHA Mortgage assistance.

CPSC NEEDS HELP

NVFC members are being asked to help alert the Consumer Product Safety Commission (CPSC) to possible defects or potential problems related to the safety of consumer products. CPSC relies on information provided by fire departments and state and local health agencies, as well as individual consumer complaints, to guide its action to deal with potential product safety hazards. The Commission has the authority to order the repair, replacement, or purchase price refund of products determined to contain defects that present a substantial risk of injury to the public.

To report unsafe consumer products or a product-related injury, call the toll-free CPSC Hotline at 1-800-638-2772, or contact your nearest CPSC office.

BURNED VEHICLES CAN BE HAZARDOUS AFTER THE FIRE IS OUT

From The AFB, The Official Publication of the International Association of Auto Theft Investigators, July - August - September 1991

The International Association of Auto Theft Investigators (IAATI) learned of two very similar incidents, both of which led to serious medical problems for two investigators, and could be potentially dangerous to other officers, especially those who routinely examine burned vehicles.

On September 18, 1990, Rich Spencer a private investigator specializing in cause and origin arson investigations for insurance company clients, inspected a burned motor home in Tiffin, Ohio. The following day he had cause to examine a burned late model automobile, also in the Tiffin area. Both fires were approximately 3 days old at the time of the inspection and required that ash and debris be removed from the vehicles.

On September 21, Investigator Spencer began to experience pain in his chest area, and by early September 22, was taken to the emergency room of Mercy Hospital in Tiffin. Doctors first felt he had experienced a heart attack but this was ruled out after tests. It was finally determined that he had suffered from spasms of the lungs, cause not determined.

On September 27, Investigator Spencer was transferred to St. Vincents Hospital in Toledo for specialized tests. He was released from St. Vincents on October 4.

On October 6, he suffered a relapse, and was re-admitted to the hospital and released on October 8. Since that time, Investigator Spencer has suffered breathing problems and generally poor health.

At this time, the pain was so severe, that Detective Foster was losing consciousness.

An interview with Spencer's doctor, by Tony Breece, Special Agent, National Automobile Theft Bureau, revealed that the exact cause of the attack has not been determined. Investigator Spencer suffered severe muscle spasms, possibly caused by a reaction to an outside contaminant, which also has not been determined. Attempts to isolate a specific cause by trying to determine what was present in Investigator Spencer's environment which was not present in other fire investigations have not been successful. Whether this was an allergic reaction specific to Investigator Spencer, or a general reaction to a contaminant which would affect anyone is unknown.

Investigator Spencer is to undergo further testing in an attempt to determine the cause of the attack, but his health is such that he has been unable to do so yet.

Investigator Spencer feels that his illness is directly related to his breathing of the ash in his fire investigation. He feels that a possible source of his illness might be arsenic which he states is used as a preservative in mobile home flooring, or fumes from butadiene styrene (ABS), or molded polyurethane which are two common plastics used in automobile interiors.

This was a life threatening episode for Investigator Spencer but a worse incident follows.

On October 2, 1990, Vancouver, Canada Police Detective Gary Foster was called to examine 3 vehicles damaged by fire. His examinations started at 0800 and concluded about two hours. Sometime near noon, Detective Foster began to feel a general weakness in both arms and legs and light headedness. He reported to the police nurse's office where his blood pressure was recorded at 160/115.

After about 90 minutes, Detective Foster was feeling worse, with headaches and minor chest pains. He revisited the nurse's office where the same blood pressure reading was recorded. Detective Foster then called his doctor's office and left for an immediate appointment. As a result of this examination, Detective Foster was admitted to the Royal Columbian Hospital at 1600 hours, October 2, after being sent there by ambulance from his doctors office. At this time, the pain was so severe, that Detective Foster was losing consciousness.

After two days in emergency care, Detective Foster was admitted to the Cardiac Care Unit with erratic heartbeat. On October 5, Detective Foster underwent open chest surgery in an attempt to stabilize his heart rate, which was so erratic it was life threatening. Detective Foster remained in intensive care for three weeks before being released. Less than two days later, the intense pains returned, and Detective Foster was re-admitted to the intensive care unit at Royal Columbian Hospital where he remained for another week.

As of this writing, Detective Foster still has inflammation of the heart and chest (myocarditis).

Detective Foster's cardiologist suspects that his erratic heartbeat is caused by an overdose of some unknown drug, poison or toxin, as no other identifiable agent could be found to cause the incident.

In both cases, doctors for both Investigator Spencer, and Detective Foster are very interested in determining any common link between these incidents. Anyone with knowledge of similar incidents, are urged to contact the newsletter offices by phone or fax, so that the information can be relayed to the proper medical authorities.

Airbags on 1990 Chrysler, GMC and Ford Automobiles use Sodium Azide to activate the bag. All three companies are posting warnings on the container stating that the dust or acute gas exposure may produce medical problems and/or death. Also, if that is not enough, when the air bag system is activated, a by-product of Sodium Azide called Sodium Hydroxide the main ingredient of Drano, forms a dust on the outside of the bag. It is also reported that the steering wheel gets very hot. The automobile companies ask that you not approach for 10 to 20 minutes. Fire people have been warned to use full turn-out gear, and approved self-contained breathing apparatus. In a fire situation, the bag can act like a cannon. If the air bag system had not yet activated during a fire or emergency situation, disconnect the battery. Sodium Azide is an explosive solid and highly poisonous. It will effect the body through touch, ingestion or inhalation.

There are many harmful agents used in the manufacture of motor vehicles. These could be extremely harmful to anyone who has reason to examine whole, damaged or burned vehicles. The use of protective masks or extreme caution should be used when examining burned vehicles, to avoid exposure to the ashes.

The Fire Prevention/Investigation Bureau has a Safety Alert Bulletin in regard to "Air Bags": What Emergency Response Personnel Should Know About Air Bag Passive Restraint Systems".

Departments interested in obtaining a copy of this publication should forward a letter of request to the Bureau.

FIRE SERVICE EDUCATIONAL SCHOLARSHIPS AVAILABLE

The Friendship Veterans Fire Engine Association of Alexandria, Virginia, is pleased to again announce the availability of several educational financial scholarships for fire service personnel.

The Fire Service Career Advancement Scholarship Program is offering a series of $500 scholarships to assist career or volunteer personnel from all ranks of public, private, military or industrial organizations. The scholarships will be awarded to individuals pursuing courses at accredited colleges, including community colleges, and universities that offer degree programs in the fire science discipline.

A scholarship application may be obtained from Friendship Veterans Fire Engine Association Scholarships, c/o 4611 Strathblane Place, Alexandria, VA 22304; or call 703-751-6416 for more information.

Application deadline (postmark) is Feb. 1, 1992.

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for further information
contact: Bill Kehoe
(D) 202-833-3420
(N) 703-751-6416

Wolf Point Fire Department's new Pierce Dash 4-Door, 1250 GPM, looks sharp.

Ft. Belnap Fire Department's TopKick 1250gpm engine, loaded with goodies.

FIRE BREAKS

MONTANA DEPARTMENT OF STATE LANDS

Fire Management Bureau

Forestry Division

WILDLAND NEWS & VIEWS

RURAL COMMUNITY FIRE PROTECTION

DSL is currently soliciting applications for matching funds through the federally funded, Title IV RCFP program. Applications are accepted from fire departments, rural fire districts, volunteer fire companies, and other fire organizations involved with rural fire protection in communities with populations of 10,000 or less, or a group of small communities totalling over 10,000 population (such as county-wide fire organizations). County-wide applications are encouraged.

These grant funds are used to defray up to one half the cost of developing or improving local fire protection. Potential projects include organization, training, equipment purchase or development, and fire prevention. The construction of fire stations or equipment storage facilities does not qualify, however.

Each year, about 90-100 applications are received. Of these, 50-60 are approved for funding. The total money available to DSL for disbursement in 1991 is anticipated to be comparable to last year - about $60,000.

Applications and additional information can be obtained from the following address:

Department of State Lands
Division of Forestry
2705 Spurgin Road
Missoula, Montana 59801
Attn: RCFP

Completed applications should be returned to the Division of Forestry and must be received no later than February 14, 1992.

In upcoming issues of Fire Guard, we'll be providing news and updates on rural fire protection issues such the State/County co-op program, RCFP, the National Fire Mobilization Act, and mobilization of local government firefighting forces.

Kelly R. Close, Rural Fire Coordinator
Fire Management Bureau

" The Step Test"

What is it? What does it mean to Montana firefighters? How do we learn more about it? These are some questions that are frequently asked in and around many Montana Fire Departments.

The step test is a simple five-minute test designed to measure an individual's physical fitness and to predict their ability to sustain arduous work. The fitness evaluation, developed by the Missoula Equipment Development Center in the 1970's, is designed for men and women of all ages. The test predicts the ability to take in, transport and utilize oxygen (aerobic capacity) of an individual.

The test has been universally used for many years in the wildland fire community as an accepted method of measuring physical fitness. Persons with known heart ailments or serious respiratory problems should not take the test without a physicians approval.

The test involves stepping onto an elevated platform for a five minute period at a constant pace. The platform height is 15 3/4 inches for men and 13 inches for women. The pace is set with a metronome (or recording) that is 90 beats per minute. After five minutes of exercise, the person's pulse in taken for 15 seconds starting 15 seconds after the step test exercise.

This pulse is then adjusted into a fitness score that takes into account body weight and age. This is done using a simple sliding scale calculator. The final result is a score that reflects the physical fitness of an individual. The higher the score, the higher the physical fitness rating. Theses scores are then used as criteria for different work positions on wildland fires.

In the past, DSL has hired many local government firefighters as emergency firefighters without any physical fitness requirement. Effective May 1, 1992 all local governments firefighter hired by DSL must meet a minimum Step Test physical score of 40 or the equivalent for in-state employment. An equivalent is a test such as a running test (1.5 miles in 12:45 or less) or
a Physical Agility Test that is in compliance with NFPA Standard 1001 or 1500.

For all Out-of-State assignments, personnel assigned by DSL to perform wildland firefighting duties must meet a minimum Step Test score of 45, or the equivalent such as a running test (1.5 miles in 11:40 minutes or less). The responsibility for verifying the fitness of an individual will be set at the local fire jurisdictions. The details of implementing this requirement will be worked out in a meeting scheduled for mid-January with representatives of all of Montana's fire service.

As part of supporting this plan, Land Offices of the Montana Department of State Lands will provide a cassette recording of the step test and procedures, the physical fitness calculator, and a drawing of a step test bench. These will be provided to interested fire departments at no charge.

The goal of the program is to promote good physical fitness within all fire departments and to ensure that physical fitness standard is met for those departments who chose to be employed as emergency firefighters by the state of Montana.

L.C.E.S. THE KEY TO SAFE PROCEDURES

The wildland fire environment has four basic hazards: lightning, fire-weakened timber (standing and down), rolling rocks, and entrapment by running fires. When these hazards exist, two options exist:

1. Do not enter the environment...
2. Adhere to safe procedures. The key to these safe procedures is

L.C.E.S.

"LCES" stands for "lookout(s), communication(s), escape routes, and safety zone(s)." These are the same items stressed in the FIRE ORDERS and "Watchout Situations". They should be viewed from a "systems" point of view, all interconnected and interdependent. Each should be evaluated independently, but importantly also evaluated as a system. For example, the best safety zone is of not value if your escape route does not offer timely access when needed.

A key concept: the LCES system is identified to **each firefighter prior** to when it must be used. The nature of wildfire suppression dictates continuous evaluation of LCES and when necessary, reestablishment of LCES as time and fire growth progress.

LOOKOUTS

Lookout(s) or scouts (roving lookouts) need to be in a position where both the hazard and the firefighter(s) can be seen. Lookouts must be trained to observe the wildland fire environment and to recognize and anticipate fire behavior changes. Each situation determines the number of lookouts that are needed: due to terrain, cover and fire size, one lookout is normally not sufficient. When the hazard becomes a danger, the lookout relays the information to the firefighters so they may reposition to the safety zone. Actually, each firefighter has both the authority and responsibility to warn others when hazards become threats to safety.

COMMUNICATIONS

Communication(s) is the vehicle which delivers the message to the firefighters, alerting of the approaching hazard. As stated in current training, communications must be prompt and clear, whether by radio or verbal.

ESCAPE ROUTES

Escape routes are the paths the firefighter takes from his/her current threatened position to an area free from danger. Notice that escape routes is the term used, rather than "escape route(s)". Unlike the other components of the system, there must always be more than one escape route available. A single escape route may be cut off - Battlement Creek 1976 lucidly defined why another route may be needed.

Escape routes are probably the most elusive component of LCES. Their effectiveness changes continuously. As the firefighter works along the fire perimeter, fatigue and spatial separation increases the time required to reach a safety zone. The most common escape route, or part of one, is the fireline. On indirect or parallel fireline, problem situations become compounded. Unless safety zones have been identified ahead as well as to the rear, firefighter retreat may not be possible.

SAFETY ZONES

Safety zone(s) are locations where the threatened firefighter may find adequate refuge from the danger. Improperly and unfortunately, shelter deployment sites have been termed "safety zones".

Safety zones should be conceptualized and planned as a location where not shelter will be needed. This does not imply that a shelter should not be deployed if needed, only that if there is a deployment, that location is not a true safety zone. Fireline intensity and topographic location determine a safety zone's effectiveness.

To reemphasize, the LCES system must be identified prior to when it must be used! Each time firefighters are working around hazards, lookouts must be posted with adequate communications to each firefighter, with a minimum of two escape routes from the work location to an adequate safety zone (NOT a shelter deployment site).

Safety tactics should not be considered as separate entities! As with any task, safety and technique necessarily should be integrated.

The LCES system should be automatic in any tactical operation where a hazard exists or could be present.

LCES is simply a re-focusing on the essential elements of the FIRE ORDERS. The systems approach stresses the importance of the components working together. The LCES system is a result of analysis of fatalities and near-misses for over 20 years of active fireline suppression duties.

All firefighters should be given an interconnecting understanding of Lookout(s), Communication(s), Escape routes, and Safety zone(s).
(Edited from Wildland Fire Notes Nov.91)

DSL FIRE TRAINING

Local Land and Unit offices of DSL offer 3 training packages to local government fire departments. These programs are the Basic Wildland Firefighter, Intermediate Wildland Firefighter, and Multi-Resource Incident Management. These programs are designed to help local fire departments suppress and manage fires on a local basis.

These classes are scheduled on a local basis to meet local needs. Class schedules vary from weekend classes to evening classes over several weeks. For further information, contact your local DSL office.

The Power of Politics Symposium

April 21-25, 1992 Missoula, Montana

1992 Schedule Highlights*

Tuesday , April 21

10:00 am - 12:00 pm	Conference Registration
11:00 am - 4:00 pm	"Current Affairs" Seminars by Agency Sponsors

Wednesday, April 22

Opening-	Charles M. Russell retrospective and a dramatic presentation on the History of Wildfire Protection
Morning-	President George Bush and Governor Ann Richards of Texas
Afternoon-	Robert Barbee, Yellowstone National Park Superintendent and James Mapes, creator of Quantum Leap Thinking
Evening-	Capitol Steps, political satire troupe from Washington DC

Thursday, April 23

Morning-	Dr. Larry Sabato, nationally-know political scientist; Governor Bill Clinton of Arkansas and Pennsylvania Congressman Curt Weldon; and Hal Bruno, ABC Political Affairs Director
Afternoon	Manuel Lujan, Secretary of the Interior, and Robert Fulguhm, philosopher and author of All I Really Needed to Know I Learned in Kindergarten

Friday, April 24

All Day-	Special Activities such as golfing or tours of Glacier National Park, the National Bison Range, the historic Ninemile Remount Center, or the Big Hole Battlefield

Saturday, April 25

All Day-	Concurrent Workshops (8)covering such subjects as dealing with the media, elected officials and the public;community partnerships; the effects of changing demographics; and innovative budgeting

Registration Information

Fees: $145 for members of NFPA, Wester Fire Chiefs, or the International Association of Fire Chiefs -- $195 for non-members (includes 1-year NFPA membership) --$85 for students

Phone (406) 243-4623 or 243-2900 or write to the Center for Continuing Education,
The University of Montana, Missoula, Mt 59812

All participants receive Monte Dolack's specially commissioned Wildfire print.

* Tentative schedule based on current planning. Political speakers cannot be confirmed until 1992.

Fire Training School Section

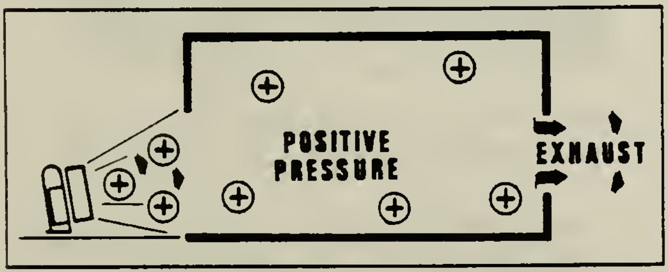
Positive Pressure Ventilation

(In General Terms)

Property damage resulting from heat and smoke account for the greatest proportion of costs from fires. Quickly and efficiently ventilating structures during and after a fire can substantially reduce fire fighter risks, assist in rescue and offensive attack tactics and minimize property damage.

Positive Pressure Ventilation (PPV) is a technique which is being increasingly used by fire departments due to its speed and effectiveness. Montana's Fire Fighter 1 Program uses positive pressure ventilation in many of the tactics.

To ventilate a building as seen in the diagram below, the door is opened and a blower is positioned **outside** the building. This method will force clean, fresh air into the building and create a positive pressure similar to inflating a balloon. When a window or door is opened, the smoke contaminants from **all** parts of the building exhaust to the exterior similar to piercing a hole in an inflated balloon.



The advantages of positive pressure over negative pressure ventilation are:

1. Positioning of blowers on the exterior of a building eliminates exposure to hazardous interior contaminants.

2. Blowers require less cleanup and maintenance as contaminants are not drawn through the blowers.

3. Blowers do not block doorways, windows, and halls.

4. Fire fighters can operate in a clean interior environment.

5. Exterior blowers efficiently remove contaminants at the top, bottom, and corners of a room or building.

6. Positive Pressure Ventilation is approximately twice as efficient at removing contaminants from a building than negative pressure.

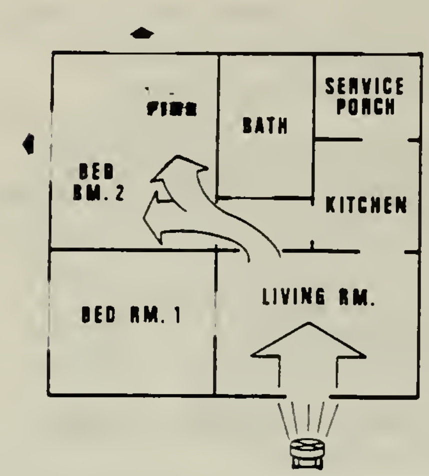
Training and Communication

Effective Positive Pressure Ventilation is dependent on controlling the entrance opening, the path of the interior air flow, and the exhaust opening. These factors can only be achieved in their proper order if all fire fighters engaged in this ventilation tactic have been properly trained and are aware of its objective.

Ventilation tactics should be part of Department's Standard Operational Procedure.

Fire Attack

(Using Positive Pressure Ventilation)



Positive pressure utilized under the right circumstances as a fire suppression technique in confined structure fires provides the following results:

1. Smoke and heat are significantly reduced.

2. Internal temperatures within the structure are reduced.

3. Fire fighters can usually enter an involved structure and walk upright instead of crawling on the floor to advance an attack line.

4. Reduce time to place attack lines into operation and put water on the fire.

5. When water contacts a fire, the resultant steam is carried away from the fire fighters on the attack line.

6. Reduce the potential for flashover conditions.

7. Enhance fire fighter safety.

To ensure successful fireground operations, this technique must be utilized within the following parameters:

1. Technical and operational knowledge of positive pressure is essential.

2. This technique is most effective on confined structure fires. However, attic fires should be carefully evaluated prior to the introduction of pressurized air.

3. Backdraft conditions must not be present.

4. Two 3 - 6hp in-line blowers provide most effective results.

5. Pressurized air from blower(s) must seal the opening to the structure.

6. The exhaust opening should be as close to the seat of the fire as possible. Horizontal (windows or door) or vertical (roof openings) exhaust openings can be utilized.

7. Advance attack lines into the structure approximately 5 to 15 seconds after the implementation of positive pressure.

To Learn More About It....

The Fire Training School's Resource Center has video tapes, books and overhead transparencies on Positive Pressure Ventilation. Call us if you have any questions about positive pressure ventilation.

There is no tranquilizer in the world more effective than a few kind words.

Learn to Learn

Training in Context

This is the first in a series of articles on the Fire Training School's **Training in Context** learning system.

Under stress you will perform as you have been trained. Based on this premise, the learning environment should recreate the context and content of the environment in which performance is expected.

Because manuals and standards are written according to topics, that's the way we train. There are chapters on individual topics like SCBA, ladders, individual tools and apparatus, and on and on. But in real life incidents, we don't have chapters and topics.

You can't become a good shortstop by just practicing fielding ground balls. You have to field, set and throw. All those skills must be performed together. The same is true in fire fighting.

It's kind of a "you can't do one without the other" approach. This doesn't always fit well with traditional training techniques we are all used to.

(F.Ray Ruffatto is coaching a crew of Wolf Point fire fighters during a flat roof ventilation tactic)

A true measure of learning is how you perform the tactic the next time you try it. We see **training in context** helping fire fighters improve their fire fighting. This is learning, not just training.

The easiest way to understand this learning system is to see it in operation, participate in it, coach it and help develop it.

(Crew leader Dick Philips communticates with Incident Commander after search tactic was completed)

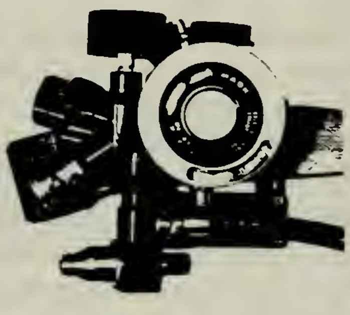
I recently attended a weekend course in Wolf Point. Like I said you have to see this learning system in operation to appreciate it. Two crews were in constant operation with two coaches, an incident commander and many support personnel. One crew was from Sidney. I talked to one of the crew leaders Dick Philips. Philips is an fire fighter in Sidney but participated as a Crew Leader at this course. The two crew members from Sidney were Ken Volk and Gary Netz. Philips liked the concept, "Sometimes we don't get many calls, and this real type training is an experience." Philips added, "The physical exertion was something I had not experienced in prior training sessions."

(Bret Haggerty giving crew orders from Incident Command Vehicle)

Learn to Learn Continued:

I visited with Bill Pettit from the Wolf Point Fire Department. This was Bill's second weekend of **training in context**. He was really geared up for the weekend. Bill's other crew members were Doug Hopson and Crew Leader Mike Weeks. Pettit said, "I really like this type of training, it gets a fire fighter to a performance standard in a short period of time." Bill and other Wolf Point fire fighters are implementing **training in context** into a lot of the department training activities.

Your Life Depends On...

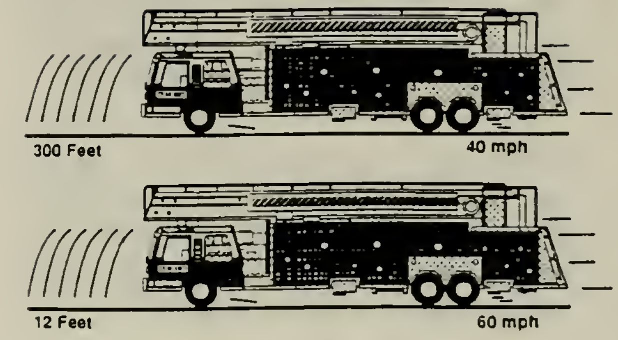


The low pressure alarm device on your SCBA is intended to alert the user when there is a danger of running our of air. Twice, in recent Fire Training School classes, students have taken SCBA from their apparatus and used them in simulated fire scene rescue situations, and had the low pressure alarm fail to give a warning. Had this occurred at an incident, instead of during training, the consequences could have been severe. Does you organization have a procedure for routine SCBA inspections? At an emergency incident, you life may depend on your SCBA!

Wanted

Used Surplus Siren for Big Sky Community, contact Keith Belden in Bozeman at 587-0721.

Sirencide



Estimated projection of sirens

Sirencide is a term used to describe the emotional reaction of emergency vehicle drivers when they begin to feel a sense of power and urgency that block out reason and prudence. It increases as siren use increases and lends to the reckless operation of the emergency vehicle.

The siren on an emergency vehicle is a tool with limits to its proper use. It is a low-speed warning device. A siren is linked to about a 125 foot range and speeds of about 30 miles per hour. A vehicle may outrun the reach of its siren, just as a vehicle can be going too fast to respond to the effective reach of its headlights. Thus, a lower speed response may actually reduce response time because drivers can hear and properly react to the approach of the emergency vehicle.

All emergency vehicle drivers must be aware of other drivers, whose response is always unknown, and drive defensively without depending on a siren or other warning device.

Blessed are those who give with remembering and take without forgetting.

Education vs Training

Montana fire officials have been receiving calls from marketers for the new fire service television network. As a result, FTS has been receiving inquiries about the value of such a program. Our advice is this: For fire fighters to perform skills well on an incident scene, practice, and lots of it, is required. The new television network offers education. Education is important because it exposes us to new ideas and encourages us to think. But education is not training!

If you elect to subscribe to this new service, don't assume that your ability to perform fireground skills will be retained or improved as a result. Quality performance is the result of quality training.

Haz Mat Training

The Fire Training School (FTS) completed a project, in cooperation with the State Emergency Response Commission (SERC) which trained 124 instructors to teach a course on the Haz Mat "Awareness Level." Our thanks to all who have participated and hosted the awareness handoff courses.

In 1992 the objective will be to train instructors for the "Operations Level" Course. The first Instructor Hand Off Course is scheduled April 3 - 5 at FTS in Great Falls. A second hand off is planned for June in Billings.

Local emergency planning committees will be asked to nominate instructors for this training. Charles Wright of Union Pacific and a representative from EPA will do the instructor training.

Caught Doing IT Right!
(in the media)

Jim Newman, Cut Bank Fire Chief and his fire fighters for getting a bond issue approved 7 to 1 for a new engine and for getting fireworks banned from city limits!

Tom Kingma, Rae Fire Chief crediting sprinklers with a save at Gibson Guitar.

Tom Romo, Wolf Point Fire Department declining to speculate on the cause of a fire where the investigation had not been completed

John Meckler, Plains Fire Department notifying the town council that the fire department has limitations in their capabilities.

Karl Rowe, Bozeman Fire Department doing forcible entry from the side, with full gear and tank air on at working structural fire.

Rest in Peace

Retired Wolf Point Fire Chief Robert Hanson passed away December 5. Hanson had been a member of the Wolf Point Fire Department for 20 years.

People will judge you by your actions, not your intentions. You may have a heart of gold, but so does a hard-boiled egg.

Are Your Basic Skills Up to Par?

(Written by an anonymous Fire Fighter)

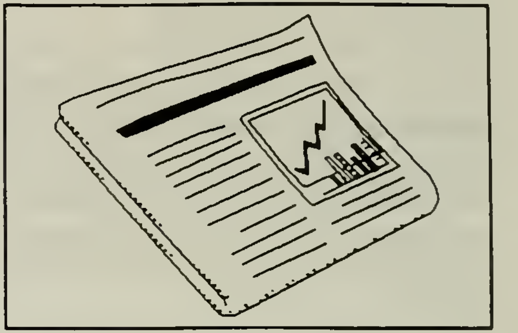
I am a bystander at a fire. I am watching my department, and I know they will do a good job. We are a good, aggressive department, and we have training activities frequently. It appears to be a routine "room and contents fire." It should be a piece of cake, then the unexpected happens. The first line off is a nasal canula! Water is dribbling out of the two prongs, the officer sees this and calls the pump operator on his portable radio. I am able to hear their conversation. "What the hell are you getting for pressure?" "120/80," is the engineers response. "120/80, you idiot, that canula has a wye in it!" The conversation escalates to a heated argument, and I wake up.

It's a bad dream that causes me to take a look at all the training we have been doing. In our efforts to meet the requirements placed on fire departments by CFR 29, 1910, and EMS laws, it seems that we train on everything but fire fighting. My department has recognized this and is beginning a program, **"Back to Basics."** How many departments are still spending their entire budget on EMS, or rescue training? It might not happen the way my fictitious scenario did, but let me give a real life example.

One of our fire fighters was overcome by smoke in a fire and had to be rescued by his fellow fire fighters. He was wearing an SCBA with a face mounted regulator that the department recently purchased. During interior operations the regulator became dislodged from the facepiece, and he was unable to reconnect the regulator.

This fire fighter had 100 plus hours of EMS training during year, but obviously not enough training to function safely in his breathing apparatus.

This incident suggests that we may have lost sight of our purpose of being fire fighters and rescue personnel. We must train to save the lives of our citizens, however, we cannot forfeit the training that allows us to protect their property without the skills to protect ourselves. I am not suggesting EMS training is not important, I am suggesting that fire fighters be trained as fire fighters first, and as care providers second. It doesn't cost a lot to do primary search, lay hose, or execute ventilation tactics. Save your money and your life.

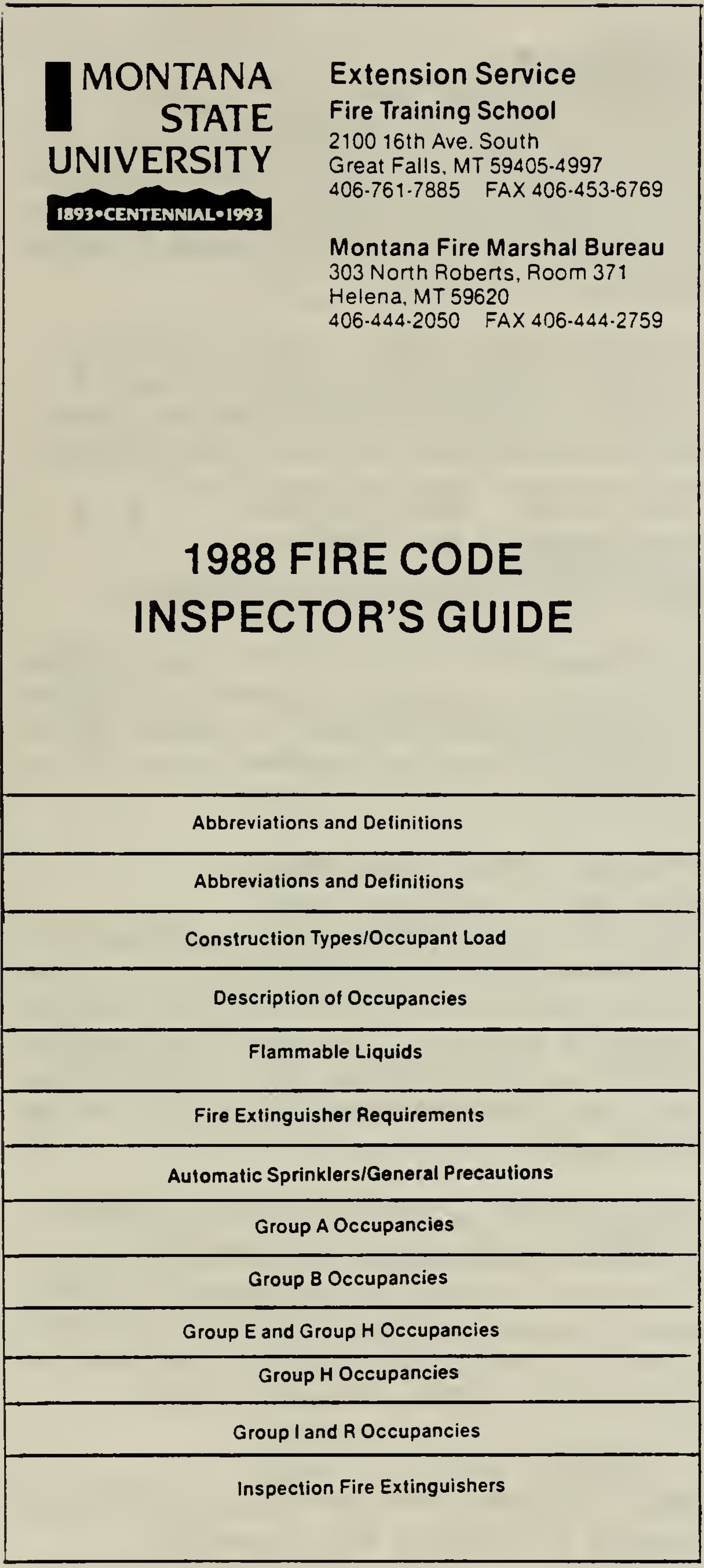


Antifreeze Info Needed

Several automotive fires allegedly involving ethylene glycol-based antifreeze have been reported to the NFPA this year. Each case involved the rupture of a coolant hose in the engine compartment when the engine was running or was still hot. In at least one case, the concentration of antifreeze in the coolant system exceeded 90 percent, much higher than the optimum 1:1 antifreeze/water mixture.

If you have knowledge of fires involving similar situations, please contact Robert Benedetti, NFPA Senior Flammable Liquids Engineer, (617) 984-7433.

"Before you give somebody a piece of your mind, make sure you can get by with what you have left."



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Extension Service
Fire Training School
2100 16th Ave. South
Great Falls, MT 59405-4997
406-761-7885 FAX 406-453-6769

Montana Fire Marshal Bureau
303 North Roberts, Room 371
Helena, MT 59620
406-444-2050 FAX 406-444-2759

1988 FIRE CODE INSPECTOR'S GUIDE

- Abbreviations and Definitions
- Abbreviations and Definitions
- Construction Types/Occupant Load
- Description of Occupancies
- Flammable Liquids
- Fire Extinguisher Requirements
- Automatic Sprinklers/General Precautions
- Group A Occupancies
- Group B Occupancies
- Group E and Group H Occupancies
- Group H Occupancies
- Group I and R Occupancies
- Inspection Fire Extinguishers

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Upcoming Courses of Interest

JANUARY

11 - 12 ***NEW CHIEFS/TRUSTEES COURSE*** (FTS - Great Falls)
This Course will provide newly appointed Fire Chiefs/Trustees with exposure to the challenges they face and the range of skills required for success. Topics include management and leadership skills, incident management concepts, support resources and liability issues in the fire service. {Fee: $50/person}

21 - 22 ***LEADERSHIP WITH ALAN BRUNACINI*** (Gallatin Gateway Inn - South of Bozeman) Seminar begins at 2PM on Tuesday, January 21. Topics of discussion include: Command Safety, Customer Service, Internal Relations, Current Events and Future Forecast. {Fee: $80/person includes dinner Tuesday evening and lunch on Wednesday.}

FEBRUARY

1 - 2 ***BASIC PHOTOGRAPHY AND CAMCORDERS COURSE***
(FTS - Great Falls)
Participants will be able to operate their cameras under different lighting conditions . Good understanding of camera and flash fundamentals make fire and legal photography more effective. Camcorder will be covered on Sunday. Students will video tape a session and edit it into a final product. {Fee: $20/person}

22 - 23 ***TEACHING EFFECTIVELY: WHAT CAN I DO?***
DR. RICHARD WALLS, Ph.D. *(FTS - Great Falls)*
Topics include: The Five Most Effective Things An Instructor Can Do To Facilitate Learning, Macro-Principles of Good Teaching and other activities to upgrade instructional skills. (A good course for Instructor recertification.) ***Dr. Walls*** is a Professor of Education Psychology at West Virginia University. His students have commented that "he knew what effective teaching was and masterfully exhibited it in the classroom." {Fee: $45/person}

29 - 3/1 **UNIFORM FIRE CODE COURSE ADMINISTRATIVE AND LIFE SAFETY SYSTEM SECTION WITH ROSS FOSSBERG**
(FTS - Great Falls) Course deals with the recently adopted 88 Uniform Fire Code. Students should bring copies of Fire and Building Codes. Ross Fossberg is a Code Consultant, National Fire Academy Instructor and former Fire Marshal of Anchorage, Alaska. {Fee: $50/person}

MARCH

2 - 3 **UNIFORM FIRE CODE COURSE ARTICLE 80: HAZARDOUS MATERIALS WITH ROSS FOSSBERG** (FTS - Great Falls)
Comprehensive instruction in the use of Article 80, includes retroactive application. Valuable for anyone who stores, handles or uses hazardous materials.

APRIL

4 - 5 ***NFA MANAGING COMPANY TACTICAL OPERATIONS: DECISION MAKING*** *(Florence)*

Designed to develop the Company Commander's supervisory and management capabilities in structural fire fighting operations. Examines critical elements of situation assessment and decision making including command sequence, size-up, assessment of resource requirements, critical, strategic, and tactical decisions; and action planning.

4 - 5 ***NFA MANAGING COMPANY TACTICAL OPERATIONS: DECISION MAKING*** *(Billings)*

Same description as Course in Florence (April 4-5).

3 - 5 ***HAZARDOUS MATERIALS "OPERATIONS LEVEL" INSTRUCTOR HANDOFF COURSE*** *(FTS - Great Falls)*

Charlie Wright, Union Pacific Railroad will be instructing this hazardous materials update. Instructor's attending this three day hand-off Course will be able to teach the "Operations Level" Course.

25 - 26 ***ARSON EVIDENCE COLLECTION*** *(FTS - Great Falls)*

For those who conduct initial and followup investigations to determine cause and origin. The Course focuses on evidence. Barker Davies nationally known arson investigator/instructor and perhaps the foremost authority on clues to determining fire cause. {Fee $40/Person}

25 - 26 ***NFA MANAGING COMPANY TACTICAL OPERATIONS: DECISION MAKING*** *(Bozeman)*

Same description as Course in Florence (April 4-5).

25 - 26 ***NFA MANAGING COMPANY TACTICAL OPERATIONS: DECISION MAKING*** *(Columbia Falls)*

Same description as Course in Florence (April 4-5).

MAY

2 - 3 ***NFA LEADERSHIP I: STRATEGIES FOR COMPANY SUCCESS*** *(FTS - Great Falls)*

Designed to meet the needs of the company officer, this Course provides the basic skills and tools needed to perform effectively as a leader in the fire service environment. Addresses the techniques and approaches to problem-solving, identifying and assessing the needs of the company officer's subordinates, running meetings effectively in the fire service environment and decision making for the company officer.

1992 TRAINING SCHEDULE

It is important to pre-register for each of the following courses as minimum attendance has been established and must be met or the class will be canceled. NOTE: (NA-National Fire Academy Field Course); (FTS-Fire Training School located in Great Falls Vo-Tech Center; 2100 16th Avenue South); (EMS-Emergency Medical Services Bureau, 444-3895); (DES-Disaster & Emergency Services, call 444-6963 to register); (DOT-Department of Transportation); (DSL-Department of State Lands, call 542-4300 for info); (EENET-Emergency Education Network Satellite Programs; Galaxy 6, Transponder 10).

DATE	COURSE 1992	LOCATION
January		
2	Positive Pressure Ventilation	Bigfork
4 - 5	NFA Fire Fighter Safety & Survival	Wolf Point
9 - 10	Graduate Builders Workshop	Kalispell
11 - 12	New Chiefs and Trustees Course	FTS-Great Falls
20	FTS Advisory Council Meeting	Bozeman
21 - 22	Leadership with Chief Brunancini	Bozeman
February		
1 - 2	Basic Photography/Camcorder Video	FTS-Great Falls
5	ICBO UBC Update	Helena
6 - 7	ICBO Design and Plan Review	Helena
5 - 6	Hazardous Materials Incident Management	Wolf Point
5 - 9	Characterization Seminar (Fire Safety Clowns)	Bullhead, AZ
8 - 9	Hazardous Materials Incident Management	Circle
8 - 9	Mid-Winter Muster	Rapid City, SD
22 - 23	Teaching Effectively (Instructor Training) with Dr. Walls	FTS-Great Falls
24	Uniform Building Code Public Meeting	Helena
29 - 3/1	UFC Sections: Administrative & Life Safety Systems	FTS-Great Falls
March		
2 - 3	UFC Article 80: Hazardous Materials	FTS-Great Falls
4 - 5	Northwest Management Seminar "Challenge of 90's"	Monmouth, OR
16 -17	Instructor and Training Officer Meeting	FTS-Great Falls
April		
3 - 5	Haz Mat "Operations Level" Instructor Handoff with Charlie Wright	FTS-Great Falls
4 - 5	NFA Managing Company Tactic Decision Making	Florence
4 - 5	NFA Managing Company Tactic Decision Making	Billings
19-20	Power of Politics	Missoula
22-23	Class A Foam	Boise, ID
25-26	Arson Evidence Collection with Barker Davis	FTS-Great Falls
25-26	NFA Managing Company Tactic Decision Making	Bozeman
25-26	NFA Managing Company Tactic Decision Making	Columbia Falls
27-30	5th Annual Health and Fitness Seminar	Phoenix
29	4th Annual National Fire & Emergency Dinner (Contact Karen Cook (202) 371-1277)	
May		
2 - 3	NFA Leadership - Strategy for Success	FTS-Great Falls
3 - 8	LEA Fire Investigation Course	Bozeman
June		
No Date	Haz Mat "Operations Level" Instructor Handoff with Charlie Wright	Billings

For FTS and NFA Courses use the following form.

--- REGISTRATION FORM ---

Course: ____________________ Location/Date: ____________________

Name ____________________ Soc Sec # ____________________

Address ____

Department ____________________ Daytime Phone ____________________

Return to: MSUES Fire Training School; 2100 16th Avenue South; Great Falls 59405-4997; Phone: 761-7885

**Make sure you register for each course. Please register with the various sponsoring agencies noted. For FTS and NFA Courses use the following form.*

--- REGISTRATION FORM ---

Course: ____________________ Location/Date: ____________________

Name ____________________ Soc Sec # ____________________

Address ____

Department ____________________ Daytime Phone ____________________

Return to: MSUES Fire Training School; 2100 16th Avenue South; Great Falls 59405-4997; Phone: 761-7885

Fire Guard Newsletter Subscripton

Please enclose $8.00 for 6 issues of the Newsletter. Checks only please.

Name: ____

Address: ____

City: ____________________ State: _____ Zip: ____________________

Phone Number: (_____) ____________________

Mail to: Montana Fire Training School, 2100 16th Ave. South, Great Falls, MT 59405

Fire Guard Newsletter Subscripton

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Phone Number: (_____) ____________________

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FIRE GUARD NEWSLETTER
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